Design principles for effective digital financial capability

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MSC
MicroSave Consulting

Digital access has raced ahead of capability, and closing that gap is a design challenge

Adoption of digital financial services grows faster than the ability of users to transact safely and confidently. Generic awareness programs have not been able to close that gap.

Why it matters

First-time and low-income users now transact in unfamiliar digital environments, which exposes them to fraud, mis-selling, over-indebtedness, and loss of trust. Awareness alone cannot reduce these risks.

The gap

Most capability-building efforts remain one-off, awareness-led, and supply-driven. They inform but rarely change behavior and are measured by outputs, such as sessions held rather than outcomes.

Who this is for

The same five principles apply to policymakers, who shape national strategies, funders and program teams, who design interventions, and providers, who embed capability into products.

Five design principles turn capability from an add-on activity into a designed and measurable outcome.

Five design principles underpin an effective DFC policy, program, or solution

MSC's (MicroSave Consulting) approach combines demand- and supply-side diagnostics with human-centered design, coordinated delivery, and impact measurement for policies, programs, and solutions alike.

Understand the target segment and identify objectives

Identify segment-specific needs, barriers, and capabilities through demand-side assessments of knowledge, skills, attitudes, and practices (KSAP) and through supply-side assessments, to define clear behavioral and learning objectives

1

Design innovative content

Apply human-centered and behavioral design principles to create relatable, accessible, and trust-building content that promotes informed, safe, and responsible financial decision-making across diverse audience segments

2

Balance the choice of delivery channels

Combine digital and physical delivery channels, align interventions with key life events, and sustain engagement through interactive learning, personalization, incentives, and gamification where appropriate

3

Ensure effective stakeholder coordination

Nurture collaboration among public, private, community, and ecosystem partners to strengthen policy support, improve delivery, and maximize outreach and adoption across different target groups

4

Embed impact-oriented monitoring and evaluation

Establish a strong theory of change with behavior-linked, risk-sensitive indicators, supported by data-driven monitoring, SupTech tools where applicable, and continuous learning to measure and improve program outcomes.

5

Our one connected toolkit works in five steps: KSAP diagnoses → the information-education-advice (IEA) framework shapes content → the phygital, teachable, and engagement (PTE) framework picks channels → partners deliver → monitoring and evaluation (M&E) framework proves impact

Next → Principle 1: Understand the target segment

Effective DFC starts with a clear definition of the target segment and its objectives

Principle 1: To define both ground segment selection in national and programmatic priorities, and then diagnose gaps across KSAP dimensions

Three steps to identify the target segment

Review national priorities

Anchor segment choices in national financial inclusion (FI) priorities and development goals

Analyze the data

Use FI dashboards, surveys, and other relevant data sources to identify and profile priority segments

Prioritize target segments

Select the population segments that digital financial capability (DFC) policies, programs, or solutions will target based on needs, risks, and strategic priorities

The KSAP framework pinpoints the gaps that shape financial decisions

Knowledge

The information people have about digital financial services, products, and associated risks

Skills

The ability to use digital financial services safely, effectively, and confidently

Attitudes

Trust, confidence, and the motivation to use digital financial services

Practices

Actual financial behaviors and habits observed in daily life

KSAP insights feed focused, evidence-based objectives for DFC interventions.

KSAP diagnosis identifies who to reach and what must change, and those findings shape the objectives that innovative content under the targets of principle 2.

Next → Principle 2: Design innovative content

Innovative content moves target segments from awareness to sustained safe financial behavior

Principle 2: To achieve this shift, define clear content objectives, then apply human-centered and behavioral design principles

What should the content do?

The IEA framework helps assess how DFC interventions build awareness and support informed financial decision-making across target segments.

Inform

Raise awareness of products, risks, and rights

Educate

Build the knowledge and skills to act safely and confidently

Advise

Support decisions when needed

Emotional design works on three interconnected levels

Level 1, visceral: First impressions and trust

Expressive visuals, colors, and formats, such as comics and animations, build instant trust and emotional connection. This is crucial for engaging the public on fraud and cybersecurity.

Level 2, behavioral: Usability and safe action

Practical, easy-to-follow guidance supports secure digital financial behaviors. It helps people protect their credentials, recognize fraud, and resolve issues.

Level 3, reflective: Identity and internalization

The content connects safe financial practices to people's goals, values, and everyday lives. This encourages long-term adoption of responsible behaviors.

Content that connects emotionally converts awareness into behavior. The channels it travels through, covered in principle 3, decide whether it lands.

Next → Principle 3: Balance delivery channels

Source: MSC, 2023

A balanced channel mix, timed to teachable moments, sustains engagement and drives behavior change

Principle 3: To strike that balance, combine digital and physical channels and incentivize partners to integrate financial education (FE) modules into digital interfaces

The PTE framework evaluates delivery channels on three components

Phygital

This refers to a combination of digital and in-person channels to deliver financial services and build trust. Digital channels, such as mobile apps, websites, interactive voice response (IVR), chatbots, and SMS, should complement trusted local touchpoints. These touchpoints comprise bank branches, banking correspondents, community organizations, schools, self-help groups, extension workers, and other frontline service providers.

Teachable moments

People learn best when they receive information at the moment they need it. Timely guidance matters when people open a bank account, make the first digital payment, receive a government benefit, apply for a loan, or face a transaction problem. This guidance helps build confidence, encourages safe behavior, and reduces the likelihood of fraud.

Engagement tools

They support long-term behavior change through interactive, personalized engagement tools, such as reminders, nudges, gamification, incentives, and feedback. They reinforce learning and promote safe, confident, and responsible financial decisions.

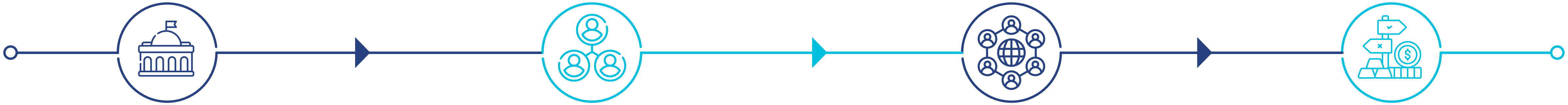
Channels timed to teachable moments put learning where decisions happen. This foundation carries into principle 4, where coordinated stakeholders take it to scale.

Next → Principle 4: Coordinate stakeholders

Source: MSC, 2023

Coordinated stakeholders make DFC delivery efficient and take it to the last mile

Principle 4: To reach that last mile, ensure every level plays to its strengths, and lock coordination in through the national strategy, a dedicated task force, and lean partnerships



National leadership

Government bodies set policy direction, governance, and oversight for DFC priorities.

Sector coordination

Financial service providers (FSPs) and associations expand their networks, expertise, and resources to broaden their outreach.

Community delivery

Implementing agencies provide capacity, coordination, and support to enable last-mile delivery.

Last-mile citizens

Communities gain access, confidence, and ownership to drive financial decisions.

Anchor in the national strategy

Set a clear governance structure, defined targets, and regular monitoring, which makes coordination an obligation built into the strategy, not a courtesy

Convene a multi-stakeholder task force

Formalize and clarify stakeholder roles across sectors and governance levels through a dedicated task force, which keeps delivery accountable

Engage broadly and keep the structure lean

Use public-private partnerships and employer-led models, such as Financial Literacy for All (FL4A) in the US and Financial Wellbeing Strategy in the UK, to widen reach, as a manageable structure avoids fragmentation

Coordinated delivery produces reach and behavior data, which is the raw material that impact-oriented M&E turns into evidence for principle 5.

Next → Principle 5: Embed impact-oriented M&E

Source: MSC, 2023

Impact-oriented M&E tracks behavior change along the theory of change and extends beyond outputs

Principle 5: To move beyond outputs, use FI dashboards, key performance indicators (KPIs), and surveys, with indicators harmonized with international standards

Participation

Indicators: Module completion rates, time spent per activity, repeat log-ins, and quiz scores.

Insight: Reveals varied engagement, which guides content refinement and incentives

Learning progression

Indicators: Drop-off points and engagement patterns tracked through learning analytics

Insight: Helps refine content and maintain engagement over time

Behavioral change

Indicators: Grievance analysis through chatbots and complaint systems, such as those of Bangko Sentral ng Pilipinas. It includes volumes, types, and resolution rates, especially for women, refugees, the elderly, and entrepreneurs.

Insight: Signals greater awareness and confidence through better complaint reporting

Financial resilience

Indicators: Sentiment analysis of public trust, capability shifts, and systemic risk, such as natural language processing (NLP) by the Bank of Italy on social media

Insight: Detects trends early, which enables decision-makers to strengthen resilience proactively

SupTech and analytics tools enable regulators, FSPs, and implementers to monitor DFC indicators at every stage of the theory of change.

Evidence of what changes behavior shapes target segments and content design, and the five principles form a continuous loop.

Next → Proof of practice: MSC engagements (annex)

Risk and safeguards keep the DFC model accountable, not just well-intentioned

Consumer protection, fraud, mis-selling, over-indebtedness, and deceptive interfaces cannot be solved by education alone. They need rules, supervision, and redress alongside capability-building, as outlined in the World Bank Financial Consumer Protection guidance.

Data privacy

KSAP, grievance, app-usage, and behavioral data need privacy-by-design controls and clear rules on what is shared, with whom, and why.

AI bias

SupTech, NLP triage, and sentiment tools can misclassify or underserve segments. These require model governance, testing, and human review before use.

Consent

Users must knowingly opt in to data use for nudges, profiling, and monitoring, not by default or through dark-pattern designs.

Vulnerable-user protection

Low-income, low-literacy, women, elderly, refugee, and informal-worker segments need explicit extra safeguards and not generic coverage.

Provider conflicts of interest

Product-embedded capability content must inform, not steer users toward the provider's own products over their best interests.

Advice or liability boundaries

Legal sign-off must define where generic guidance ends and regulated advice begins, especially for content that touches product decisions

Accessibility

Content and channels must work for users with disabilities and limited digital literacy, be localized to local languages, and not be constrained only to the digitally fluent segments.

Grievance escalation

Chatbot and NLP triage need clear escalation routes to supervised institutions and human specialists. For instance, BSP's BOB feeds a formal consumer assistance mechanism, not a standalone bot.

Financial education builds capability, but only financial consumer protection, through rules, supervision, and resolution, makes the system safe. DFC needs both, not one in place of the other.

From principles to practice: The eight implementation challenges that decide whether the DFC framework works beyond the concept stage

The five principles compress national policy, product design, SupTech, and last-mile delivery into one framework. Each layer needs its own operating model that addresses who does what, with what data, through which systems, at what cost, and against which behavioral outcomes.

1. Behavioral taxonomy

Define five to 10 priority behaviors, such as comparing loan costs and never sharing OTP or PIN, so KSAP diagnosis and M&E have a clear target.

2. A shared data model

KSAP, IEA, PTE, and complaint data need to use common definitions for segments, risks, and outcomes, or partners will measure them differently.

3. Attribution

Quiz scores, logins, and module completion do not prove safer behavior. Specify when to use A/B tests, pre- and post-studies, or mystery shopping.

4. Provider incentives

Product-embedded DFC requires banks, FinTechs, and platforms to give up interface space and share data, and this often requires regulatory or commercial incentives.

5. Last-mile quality control

Frontline staff and agents need scripts, certification, supervision, and refresher content, or training-of-trainers dilutes the message.

6. Governance and ownership

Coordination requires a lead institution, legal mandate, budget, secretariat, and a responsible, accountable, consulted, and informed (RACI) matrix, instead of a multi-stakeholder task force.

7. Privacy and consent

Data on learning, grievance, and behavioral needs privacy-by-design safeguards when linked, especially where users are low-income or low-literacy.

8. Advice risk

The advice layer of the IEA framework can cross into regulated advice or liability-sensitive guidance, so that the boundary needs a clear definition.

These challenges are the specifications a workable operating model needs to answer before the strategy moves forward.

Annex: MSC applies these principles across the spectrum, from national strategy design to last-mile delivery

Proof of practice: Selected MSC engagements across financial literacy policies, programs, and platforms in Asia, Africa, and the Southwest Asia.

Design national strategies with regulators

National Strategy for Financial Education (NSFE 3.0) 2026-30

India | NCFE, with the RBI, SEBI, IRDAI, and the PFRDA

Design the next-generation national FL strategy for India, which embeds behavioral insights, the KSAP framework, and simulation-based pedagogy across **all financial regulators**

National financial inclusion and literacy strategy

Qatar | Qatar Central Bank

Build a data-driven national roadmap built on nationwide demand- and supply-side surveys across retail, small and medium enterprise (SME), and insurance segments that cover **2.26 million people**

National Financial Inclusion Strategy (NFIS-II)

Ethiopia | National Bank of Ethiopia

Strengthen policy design and ecosystem to support regional implementation of NFIS-II across government agencies and financial institutions **at the national scale**

Deliver at the population scale

Financial literacy for microenterprises in Cambodia, Laos, Myanmar, and Vietnam (CLMV) Nations

Cambodia, Myanmar, Laos, and Vietnam

Build country-specific FL strategies across four Association of Southeast Asian Nations (ASEAN) frontier economies through **71 stakeholder consultations that** cover business skills, financial management, and capacity building. (MSC report)

ePaathshala digital learning platform

India | Multiple banking partners

Deliver a self-paced financial and digital literacy platform that reaches more than **20 million people** through banks that serve more than **300 million customers**

AI-Enabled national FL platform

India | Multiple partners

Deploy gamified and teachable-moment-based learning with persona-driven simulations and behavioral reinforcement **at the national scale**

MSC has applied these principles with regulators and governments worldwide, from strategy rooms to the last mile.

What we do

Impact-oriented consulting

Agriculture and food systems

Climate change and sustainability

Enterprise & livelihood

Ethical AI and data solutions

Evidence and impact measurement

Financial services

Digital financial services

Gender equality, disability, and social inclusion

Government advisory

Health and nutrition

MSME development

Skilling and jobs

Startup innovation and acceleration

Technology and digital public infrastructure

Our expertise

Advisory to succeed in a rapidly evolving market

Capacity building

Channel development

Design thinking and innovations

Institutional development

Marketing and communication

Policy and regulation

Product development

Program management

Research

Responsible financial systems

Risk management

Strategy development

MSC is recognized as the world's local expert in economic, social and financial inclusion

International financial, social and economic inclusion consulting firm with 27+ years of experience

>450 staff in 10 offices around the world

Projects in ~70 developing countries

Our impact so far

3.7 billion* people have benefitted from MSC-supported interventions	**1.8 billion**** individual people have benefited from MSC's work
> 4,000 projects implemented	**> 600** clients served
> 25 million people engaged with the MSC content on our website	**>2,000** publications

* Individuals may appear more than once across projects
** Estimated without double counting

Some of our partners and clients

- Gates Foundation
- MetLife Foundation
- mastercard foundation
- IFC International Finance Corporation World Bank Group
- UNCDF
- BRAC BANK
- World Bank Group
- CGAP
- Omidyar Network
- ADB Asian Development Bank
- NPCI National Payments Corporation of India
- NITI Aayog
- dfcu Bank ...with pleasure
- Equity
- Family Bank With you, for life
- FirstBank Since 1894
- Safaricom
- Centenary Bank
- m-pesa
- MTN Mobile Money
- Center for Global Development
- airtel
- vodafone
- moov no limit
- UKaid from the British people
- Michael & Susan Dell Foundation
- OJK Otoritas Jasa Keuangan
- Ecobank The Pan African Bank
- CESAG
- BURO Bangladesh
- SCBF
- avpn
- CIFAR Alliance
- Bank Asia For a better tomorrow
- AGRA Sustainably Growing Africa's Food Systems
- Upanzi Digital Public Infrastructure Network

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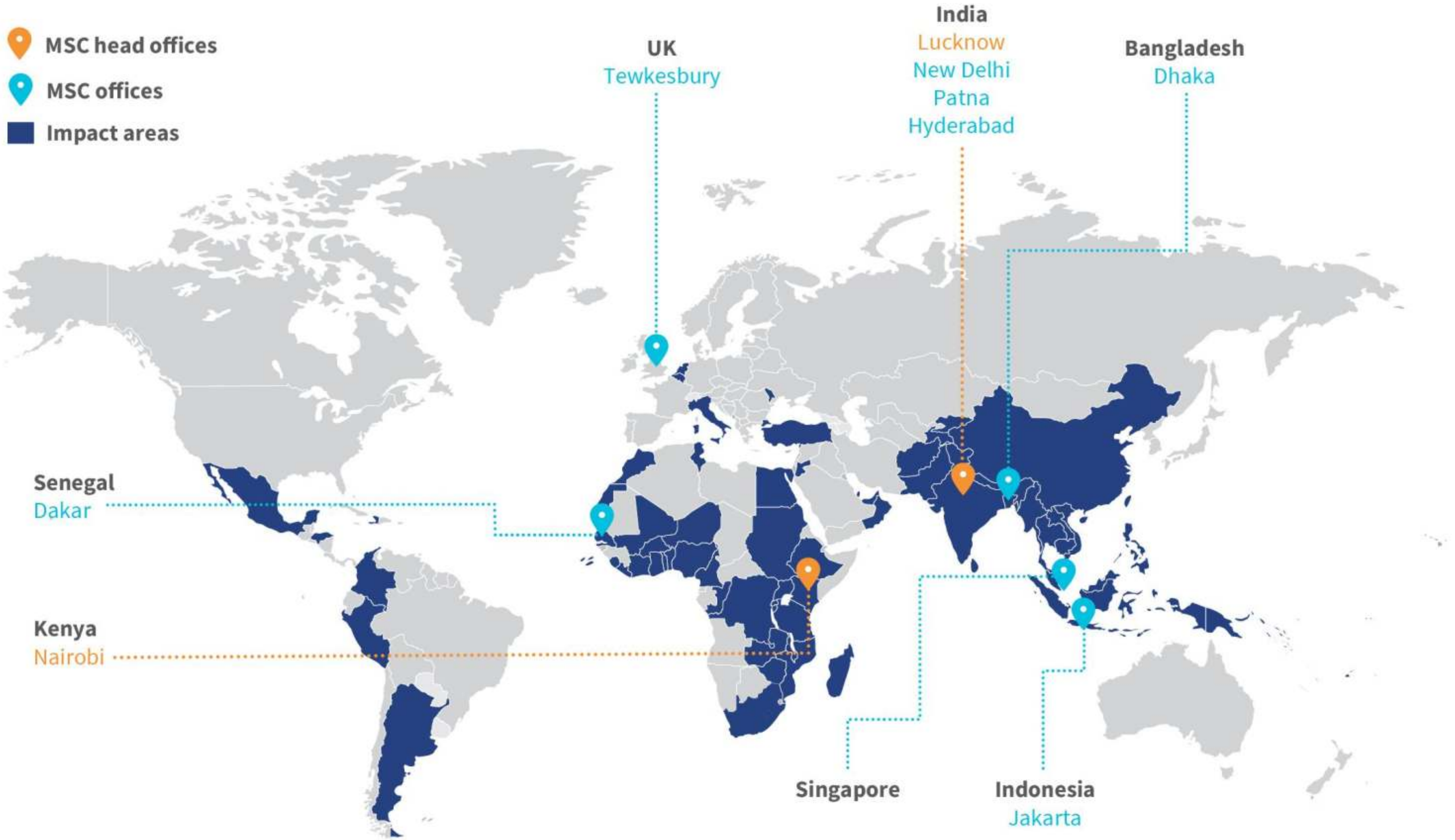

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